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Docket No.  
SHL-0030  
*215*

In Re Application Of: Szmanda et al.

Application No.	Filing Date	Examiner	Customer No.	Group Art Unit	Confirmation No.
09/723,746	November 28, 2000	H. Mahmoudi	23413	2175	6356

Invention: A METHOD AND SYSTEM FOR RECYCLING MATERIALS



COMMISSIONER FOR PATENTS:

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Signature

Dated: November 22, 2004

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Applicant(s): Szmenda et al.

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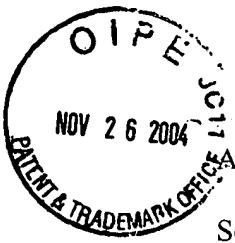


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IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Appellant: Charles R. Szmanda et al. )  
Serial No.: 09/723,746 ) Group Art Unit: 2175  
Filed: November 28, 2000 ) Before the Examiner:  
For: A METHOD AND SYSTEM FOR ) Mahmoudi, H.  
RECYCLING MATERIALS )  
)  
)

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Alexandria, VA 22313-1450

**APPEAL BRIEF**

1. **THE REAL PARTY IN INTEREST**

The real party in interest in this appeal is Rohm & Haas Electric Corporation. Ownership by Rohm & Haas Electric Corporation is established by assignment.

2. **RELATED APPEALS AND INTERFERENCES**

Appellants know of no related patent applications or patents under appeal or interference proceeding.

3. **STATUS OF CLAIMS**

Claims 1-18 were originally filed in the above-referenced application. The Appellants have canceled claims 1-18 and presented new claims 19-32. All pending claims stand rejected under 35 U.S.C. §103(a). The Appellants hereby appeal the rejections of claims 19-32.

4. **STATUS OF AMENDMENTS**

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There have been no amendments filed subsequent to receipt of the final office action.

## 5. SUMMARY OF INVENTION

The following is a concise explanation of the invention. Reference to the specification and drawings is made pursuant to 37 CFR 41.37 and is not intended to limit the claims to the embodiments shown and described in the application.

The invention as illustrated in FIG. 1, relates to a recycling system 1 for recycling waste from a plurality of waste stream providers 3. Recycling system 1 includes a waste stream monitoring module 5 that communicates with waste stream providers 3 via a waste stream provider interface 7 for the purpose of monitoring the waste generated by each of waste stream providers 3 and determining the reusable materials contained therein. Waste stream monitoring module 5 determines the reusable contents of the waste stream using any number of known methods for monitoring and analyzing the contents of waste (e.g., using predetermined manufacturing relationships, sensor device located on the waste stream, etc.). The waste stream information is provided to waste stream monitoring module 5 which then calculates the amount of reusable raw materials contained in the waste stream.

Waste stream monitoring module 5 then communicates to reusable materials database 9 the amount of reusable materials contained in the waste streams generated by each of waste stream providers 3. A price is determined for each of the recycled materials stored in reusable materials database 9 based on all relevant factors including, but not limited to, the price of the corresponding new materials, the available supply, and quality of the recycled material. Thus, reusable materials database 3 contains a searchable catalog of all the reusable materials contained in the waste streams generated by waste stream providers.

A user of access device 11 queries reusable materials database 9, via user access interface 13, to determine whether a desired material is available in recycled form from any of waste stream providers 3 and, if so, in what quantity and at what price. A purchase request is issued to user access interface 13 for a specified amount of the desired material, which in turn, forwards the purchase request to a waste

purchasing module 15. Based on the material and quantity specified in the purchase order, waste purchasing module 15 accesses reusable materials database 9 to determine which of waste stream providers 3 is the most suitable source for the specified recycled material. Upon selecting one of waste stream providers 3, waste purchasing module 15 issues a purchase order to the one of waste stream providers 3 for the waste stream from which the specified materials are to be recovered.

Upon receiving the purchase order, the one of waste stream providers 3 ships the specified waste stream to a recovery plant 17 notifies waste purchasing module 15 that the waste stream containing the desired materials was shipped.

Recovery plant 17 reprocesses the waste stream and recovers from the waste stream the materials specified by the user in the purchase request. The recovery process uses known industrial methods designed to restore the materials recovered from the waste stream (e.g., restoration to original specifications such as the materials' sensitivity, viscosity, thickness, metal ion concentration). Alternatively, the materials may be restored to revised specifications that render the material suitable for use in certain applications. The restored materials are shipped to the purchasing entity.

## 6. GROUNDS OF REJECTION

Claims 19-32 stand rejected under 35 U.S.C. §103(a) as being unpatentable over U.S. Patent No. 6,226,617 to Suzuki et al. ("Suzuki") in view of U.S. Patent No. 6,341,287 to Sziklai et al. ("Szaklai"), and in further view of U.S. Patent No. 5,970,476 to Fahey.

### A. **Rejections of claims 19, 20, 25, 26, 27, and 32 under 35 U.S.C. §103(a) regarding Suzuki, Sziklai, and Fahey**

The Examiner improperly rejected claims 19, 20, 25, 26, 27, and 32 under 35 U.S.C. §103(a) as being unpatentable over Suzuki in view of Sziklai, and in further view of Fahey. For an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would

have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996). None of Suzuki, Sziklai, and Fahey teaches or suggests all of the elements set forth in claims 19, 20, 25, 26, 27, and 32. Claims 19 and 26 recite respectively a system and method “for recycling raw materials from a plurality of waste streams generated by waste stream providers, comprising:

a waste stream monitoring module operable for:  
monitoring production of items produced by a plurality of waste stream providers; and  
determining an amount of reusable raw materials contained in a plurality of waste streams resulting from said production;  
a waste stream provider interface and communications link operable for communicating production information from said plurality of waste stream providers to said waste stream monitoring module;  
a reusable materials database in communication with said waste stream monitoring module, said reusable materials database operable for storing said amount of reusable raw materials contained in said plurality of waste streams;  
wherein said reusable raw materials are available for purchase;  
a purchase price associated with each of said reusable raw materials, said purchase price stored in said reusable materials database; and  
a user access interface and communications link operable for enabling a user to view said reusable raw materials, said user access interface in communication with said reusable materials database.”

With respect to Appellants’ claims 19 and 26, the prior art references do not teach or suggest all of the claim limitations. None of the references teach or suggest “*a waste stream monitoring module operable for: monitoring production of items produced by a plurality of waste stream providers; and determining an amount of reusable raw materials contained in a plurality of waste streams resulting from said production...*” The Suzuki reference teaches affixing a treatment label to an article

that specifies a prescribed manner of treatment for the article upon its disposition and includes information regarding the type of treatment facilities suggested for conducting the treatment. The Suzuki reference also teaches a method and means for reading the label, storing the information provided on the label, and, when needed, selecting a proper treatment means and facility for handling the article (col. 2, lines 15-57). The only monitoring recited in the Suzuki reference relates to monitoring the *disposition* treatment (i.e., post-production treatment processes). The monitoring as recited in claims 19 and 26 is directed to the *production* activities relating to an article, and *not its disposition* treatment. In support, column 4, lines 41-49 states “*a first treating means* for treating the manufactured article on the basis of a given one treatment procedure selected...*a means for monitoring situation in which the manufactured article is being treated*, a means for extracting treatment procedures serving for a same purpose as the above-mentioned selected treatment procedure *in case it is decided that the above-mentioned treating situation suffers abnormality...*” (emphasis added). The term ‘treatment’ is defined as “*detachment or segregation of all the harmful and hazardous materials/substances and parts from the collected discarded articles* as well as sorting thereof and transfer the resultants to proper treatment processes or to junk dealers as well as segregation/sorting of materials and parts incapable of treatments with the treating equipment or facilities installed in the relevant treatment-entrusted factory which is in charge of or capable of treatment of discarded articles, valuable things to be segregated before shredding and the others...(col. 1, lines 35-43, emphasis added). Thus, the production activities recited in Appellants’ claims 19 and 26 are not equivalent to the treatment activities taught by Suzuki. The monitoring recited in Sziklai is directed to monitoring the execution of source reduction practices to comply with a requirement for annually reporting releases of toxic chemicals as prescribed by the Pollution Prevention Act of 1990 and is not related to the monitoring of production activities recited in Appellants’ claims 19 and 26 (col. 7, lines 13-32). Thus, the monitoring activities in Sziklai are not equivalent to the monitoring activities recited in Appellants’ claims 19 and 26.

Additionally, Suzuki nor Fahey nor Sziklai recite monitoring production of items produced by a *plurality of waste stream providers* (emphasis added). Suzuki, as described above, does not teach or recite monitoring production of items and is further

restricted to a single enterprise operation. The Examiner has directed the Appellants' attention to col. 2, lines 58-63 in support of the notion that Suzuki teaches this limitation. Col. 2, lines 58-63 recites "not only the treatment procedures suited for the facilities of the individual factories can be carried out but also the proper and appropriate treatment of the discarded articles can be realized..." The Appellants respectfully disagree that this recitation relates to monitoring a plurality of waste stream providers. When taken in context with the entire cited art reference, the above-quoted disclosure teaches that the treatment procedures and information acquired by the Suzuki reference enable factories to identify the facilities best suited for performing the disposition treatments in order to prevent environmental pollution due to harmful waste disposal activities. Thus, Suzuki does not teach or disclose "monitoring a plurality of waste stream providers."

As with Suzuki, the Appellants submit that the Fahey reference is likewise directed to a single enterprise system. Fahey teaches a database management system that includes a data warehouse for storing and retrieving *enterprise-wide* activity based data related to a product family (emphasis added) (col. 1, lines 7-11). The cited reference is limited to applications directed to a single enterprise. Contrary to Fahey, the Appellants' invention is directed to matching purchasers (i.e., multiple enterprises) of reusable raw materials to waste stream providers (i.e., multiple enterprises) that generate these reusable raw materials as a bi-product of manufacturing. Thus, combining Suzuki with Fahey would not produce the results disclosed in the instant application.

Moreover, neither Suzuki, Fahey, nor Sziklai teach or recite a waste stream provider interface and communications link for communicating production information the waste stream providers to the waste stream monitoring module. Rather, Sziklai teaches an agent for surfing the Web and identifying "relevant regulatory and non-regulatory changes found on the Web that may affect a user's business" and further teaches an associated user interface (col. 9, lines 27-42). Thus, the user interface taught by Sziklai is not even remotely equivalent to the user interface recited in Appellants' claims 19 and 26.

Further, none of Suzuki, Fahey, and Sziklai, alone or in combination, teaches or recites a reusable materials database in communication with the waste stream

monitoring module, where the reusable materials database stores the amounts of reusable raw materials contained in the waste streams that are available for purchase. As indicated above, Suzuki recites a storage means that stores information concerning the factory facilities performing the treatment and its capabilities (col. 7, lines 1-22; col. 8, lines 41-44). The treatment procedure takes into consideration “the reuse of valuable things” so that “there can be provided less expensive treatment procedure, whereby effective treatment can be realized” (col. 13, lines 57-60). When read in context, the storage means recited in Suzuki purports to provide information concerning different treatments and factory capabilities for performing treatments in order to identify a preferred treatment type for a specific type of article of manufacture. Nothing in Suzuki indicates storing an *amount of reusable raw materials available for purchase* (emphasis added). Additionally, the market database recited in Suzuki recites storing “the price of the valuable things” (col. 16, lines 8-10). Again, if taken in context, the market database recited in Suzuki stores current market prices for valuable things which denotes an economic value assigned to the valuable things determined by the current marketplace. The current market value of an item does not equate with a purchase price. Also, without knowing the amount of available reusable raw materials, this value would not result in the pricing structure recited in the Appellants’ invention (i.e., the amount of reusable raw materials available for purchase and an assigned purchase price).

Thus, neither Suzuki, Fahey, nor Sziklai teach or recite a purchase price associated with reusable raw materials or a user access interface and communications link for enabling a user to view the raw materials stored in the reusable materials database. The reusable raw materials database stores available raw materials received from a plurality of waste stream providers. Fahey recites a storage means. However, unlike the reusable materials database of the instant application, the database management system of Fahey recites a storage means implementable by a single enterprise on an enterprise-wide basis (col. 3, lines 17-28; FIGs. 1A-1B).

As submitted above, Suzuki, Sziklai, and Fahey, neither alone nor in combination, teach each of the elements of Appellants’ claims 19 and 26. Furthermore, there is no motivation to combiné these cited art references. Fahey

teaches a database management system that includes a data warehouse for storing and retrieving *enterprise-wide* activity based data related to a product family (emphasis added) (col. 1, lines 7-11). The cited reference is limited to applications directed to a single enterprise. Contrary to Fahey, the Appellants' invention is directed to matching purchasers (i.e., multiple enterprises) of reusable raw materials to waste stream providers (i.e., multiple enterprises) that generate these reusable raw materials as a by-product of manufacturing. Thus, combining Suzuki with Fahey would not produce the results disclosed in the instant application. The Appellants' submit that claims 19 and 26 are patentable over the prior art references for at least these reasons.

Regarding claims 20 and 27, neither Suzuki, Sziklai, nor Fahey recites a waste purchasing module for receiving a purchase request from the user via the user access interface and communications link, selecting a suitable waste stream provider based upon the purchase request, and issuing a purchase order to the suitable waste stream provider for fulfilling the purchase request. Appellants' invention matches buyers of reusable raw materials (i.e., user) to producers of waste streams (i.e., waste stream providers). Suzuki recites a market information database that stores information concerning purchase prices of valuable things, information concerning demand for valuable things, and charging prices for treatment of harmful materials/substances (FIG. 6). The market information database in Suzuki contains market prices for valuable things that are used to determine whether a treatment procedure will be used in light of the costs of performing the treatment (e.g., a cost/benefit analysis) (col. 12, lines 32-65). The nature and use of the market pricing information, therefore, is not equivalent to the nature and use of the pricing information in the instant application. The market pricing data in Suzuki and retail pricing in the instant application are not equivalent. For these reasons, and for the reasons stated above with respect to claim 19, the Appellants submit that claims 20 and 27 are patentable over the prior art references.

Claims 20 and 25 depend from claim 19. Therefore, claims 20 and 25 include all of the limitations set forth in claim 19. Claims 27 and 32 depend from claim 26. Therefore, claims 27 and 32 include all of the limitations set forth in claim 26. As

explained above, Suzuki, Sziklai, and Fahey do not teach or suggest all of the limitations of claims 19 and 26. Accordingly, the Appellant submits that the rejections of claims 20, 25, 27, and 32 under 35 U.S.C. §103(a) is improper.

**B. Rejections of claims 21-24 and 28-31 under 35 U.S.C. §103(a)  
regarding Suzuki, Sziklai, and Fahey**

The Examiner improperly rejected claims 21-24 and 28-31 under 35 U.S.C. §103(a) as being unpatentable over Suzuki in view of Sziklai, and in further view of Fahey. As stated previously, for an obviousness rejection to be proper, the Examiner must meet the burden of establishing that all elements of the invention are disclosed in the prior art; and that the prior art relied upon, coupled with knowledge generally available in the art at the time of the invention, must contain some suggestion or incentive that would have motivated the skilled artisan to modify a reference or combined references. *In re Fine*, 5 U.S.P.Q.2d 1596, 1598 (Fed. Cir. 1988); *In Re Wilson*, 165 U.S.P.Q. 494, 496 (C.C.P.A. 1970); *Amgen v. Chugai Pharmaceuticals Co.*, 927 U.S.P.Q.2d, 1016, 1023 (Fed. Cir. 1996).

Claims 21-24 depend from claim 19. Therefore, claims 21-24 include all of the limitations set forth in claim 19. Claims 28-31 depend from claim 26. Therefore, claims 28-31 include all of the limitations set forth in claim 26. As explained above, Suzuki, Sziklai, and Fahey do not teach or suggest all of the limitations of claims 19 and 26. Accordingly, the Appellants submit that the rejections of claims 21-24 and 28-31 under 35 U.S.C. §103(a) are improper.

### A. Conclusion

For the reasons cited above, Appellants respectfully submit that the rejections are improper and request reversal of the outstanding rejections. If there are any additional charges with respect to this Appeal, or otherwise, please charge them to Deposit Account No. 06-1130 maintained by Appellants' attorneys.

Respectfully submitted,

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Date: November 22, 2004

## APPENDIX A

### *Appealed Claims*

CLAIM 19. A system for recycling raw materials from a plurality of streams generated by waste stream providers, comprising:

a waste stream monitoring module operable for:

monitoring production of items produced by a plurality of waste stream providers; and

determining an amount of reusable raw materials contained in a plurality

of waste streams resulting from said production;

a waste stream provider interface and communications link operable for communicating production information from said plurality of waste stream providers to said waste stream monitoring module;

a reusable materials database in communication with said waste stream monitoring module, said reusable materials database operable for storing said amount of reusable raw materials contained in said plurality of waste streams;

wherein said reusable raw materials are available for purchase;

a purchase price associated with each of said reusable raw materials, said purchase price stored in said reusable materials database; and

a user access interface and communications link operable for enabling a user to view said reusable raw materials, said user access interface in communication with said reusable materials database.

CLAIM 20. The system of claim 19, further comprising a waste purchasing module operable for:

receiving a purchase request from said user via said user access interface and communications link, said user access interface in communication with said waste purchasing module;

selecting a suitable waste stream provider based upon said purchase request;

and

issuing a purchase order to said suitable waste stream provider for fulfilling said purchase request.

CLAIM 21. The system of claim 20, further comprising a recovery plant in communication with said suitable waste stream provider, said recovery plant receiving at least one of said plurality of waste streams from said suitable waste stream provider;

wherein said recovery plant recovers a specified amount of said reusable raw materials.

CLAIM 22. The system of claim 21, wherein said specified amount of said reusable raw materials is transported to a location indicated by said user.

CLAIM 23. The system of claim 22, wherein said waste purchasing module updates amounts of available reusable raw materials in said reusable materials database based on receipt of said reusable raw materials transported to said location.

CLAIM 24. The system of claim 21, wherein one of said plurality of waste streams is generated from at least one original raw material and said reusable raw materials resulting from said recovery are different than said original raw material.

CLAIM 25. The system of claim 19, wherein said waste stream monitoring module receives batch composition information associated with said plurality of waste streams via said waste stream provider interface and communications link and said waste stream monitoring module determines said amount of reusable raw material based on said batch composition information.

CLAIM 26. A method for recycling raw materials from a plurality of streams generated by waste stream providers, comprising:

monitoring production of items produced by a plurality of waste stream

providers and determining an amount of reusable raw materials contained in a plurality of waste streams resulting from said production via a waste stream monitoring module; communicating production information from said plurality of waste stream providers to said waste stream monitoring module via a waste stream provider interface and communications link; storing said amount of reusable raw materials contained in said plurality of waste streams in a reusable materials database, said reusable materials database in communication with said waste stream monitoring module; wherein said reusable raw materials are available for purchase; associating a purchase price with each of said reusable raw materials, said purchase price stored in said reusable materials database; and viewing said reusable raw materials via a user access interface and communications link, said user access interface in communication with said reusable materials database.

**CLAIM 27.** The method of claim 26, further comprising:

receiving a purchase request from said user via said user access interface and communications link, said purchase request received at a waste purchasing module; wherein said user access interface is in communication with said waste purchasing module; selecting a suitable waste stream provider based upon said purchase request; and issuing a purchase order to said suitable waste stream provider for fulfilling said purchase request.

**CLAIM 28.** The method of claim 27, further comprising:

receiving at least one of said plurality of waste streams from said suitable waste stream provider at a recovery plant, said recovery plant in communication with said suitable waste stream provider; and recovering a specified amount of said reusable raw materials by said recovery

plant.

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SHL-0030

CLAIM 29. The method of claim 28, further comprising:

transporting said specified amount of said reusable raw materials to a location indicated by said user.

CLAIM 30. The method of claim 29, further comprising:

updating amounts of available reusable raw materials in said reusable materials database based on receipt of said reusable raw materials transported to said location, said updating performed by said waste purchasing module.

CLAIM 31. The method of claim 28, wherein one of said plurality of waste streams is generated from at least one original raw material and said reusable raw materials resulting from said recovery are different than said original raw material.

CLAIM 32. The method of claim 26, wherein said waste stream monitoring module receives batch composition information associated with said plurality of waste streams via said waste stream provider interface and communications link and said waste stream monitoring module determines said amount of reusable raw material based on said batch composition information.